



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,107	11/02/2005	Hasse Sinivaara	60091.00431	2901
32294 7590 03/05/2009 SQUIRE, SANDERS & DEMPSEY L.L.P. 8000 TOWERS CRESCENT DRIVE 14TH FLOOR VIENNA, VA 22182-6212				
EXAMINER AFSHAR, KAMRAN				
ART UNIT		PAPER NUMBER		
2617				
MAIL DATE		DELIVERY MODE		
03/05/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/555,107

Applicant(s)

SINIVAARA, HASSE

Examiner

KAMRAN AFSHAR

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 11/20/2008 have been fully considered but they are not persuasive.

Double Patenting Rejection:

Applicant argues that:

Since the claims in both the '159 application and the present application are liable to change before either issues, it is respectfully submitted that this rejection is moot. The rejection is also moot at least because the issue of double-patenting is not truly ready for determination until a patent issues, whose claims can then serve as a benchmark for determining whether the other applications improperly seek to extend the Applicant's rights.

In response to applicant's argument: Applicant request is respectfully declined till Applicant can make proper determination whether the other applications improperly seek to extend the Applicant's rights. Therefore, the previous rejection is maintained.

Claim Rejection Under 35 USC § 102(e)

In response to applicant's argument that the reference Liu (U.S. Pub. No.: 2004/0190467 A1) fail to show certain features of applicant's invention (i.e. dynamically control a power state of the at least one wireless terminal on the basis of the at least one parameter describing the data traffic pattern of the terminal and the beacon interval information to maintain the at least one wireless terminal in one of at least two power states), Examiner very kindly directs the Applicant to the controller (See Lie e.g. controller 28 of Fig. 2) that controls the operation of the subsystems of the device or the terminal or the system (i.e. transmit, receive, power save, sleep, awake, etc.). Further, Lie teaches dynamically controlling (See Liu e.g. dynamically adjusted to schedule wake-up time, Page 4, ¶ [0045]) a power state of the terminal so that the terminal is maintained in one of at least two power states

(See Liu e.g. station can remain asleep , wake up (or awaken or active), Page 4, Lines 3-7 of ¶ [0046]), on the basis of the at least one parameter (See e.g. based on one or a combination of network (packet size or data length), network traffic, traffic buffering time, data priorities, and data rate, etc., Page 4, Lines 6-8 of ¶ [0045]) describing the data traffic patter of the terminal and beacon interval information (See Lie e.g. Schedule Information Vector (SIV) power saving traffic, schedules information or time, etc. Page 4, Lines 2-7 of ¶ [0046]).

2. **Applicant(s) are reminded that the Examiner is entitled to give the broadest reasonable interpretation to the language of the claim. The Examiner is not limited to Applicant's definition, which is not specifically set fourth in the claims, *In re Tanaka et al*, 193 USPQ 139, (CCPA) 1977.** Therefore, the previous rejection is maintained.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 11/630,159. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the claimed limitations recited in the present application are transparently found in the copending application 11/630,159 with obvious wording variations. Take an example of comparing claim 1 of pending application and claims 1 of copending application 11/630,159:

Pending Application 10/555,107	Co-pending application 11/630,159
1. A method comprising: <u>receiving beacon frames at beacon intervals; extracting beacon interval information from a beacon frame; monitoring a data traffic of a terminal; defining at least one parameter describing a data traffic; and, dynamically controlling a power state of the terminal, on the basis of said at least one parameter describing the data traffic pattern of the terminal and beacon interval information</u> , so that the terminal is maintained in one of at least <u>two power states</u> , wherein said at least two power states comprise an active state and a <u>power save state</u> .	1. A method for controlling a <u>short-range wireless terminal</u> capable of operating in a first <u>beacon-based</u> network and in a second beacon-based network, the method comprising the steps of: controlling the <u>short-range wireless terminal to enter a power save state</u> with respect to a first beacon-based network; and starting operation in a second beacon-based network in response to the controlling step, wherein the controlling step is performed if the short-range wireless terminal is in an <u>active operation state</u> with respect to the first beacon-based network when the operation in the second beacon-based network is to be started.

The claims of the application 11/630,159 encompass the same subject matter except the instant application **"dynamically controlling a power state of the terminal, on the basis of said at least one parameter describing the data traffic pattern of the terminal and beacon interval information"** whereas the copending Application 11/630,159 claims are to **"controlling the short-range wireless terminal to enter a power save state with respect to a first beacon-based network"**. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to implement the copending Application 11/630,159 **"controlling the short-range wireless terminal to enter a power**

save state with respect to a first beacon-based network” as a “dynamically controlling a power state of the terminal, on the basis of said at least one parameter describing the data traffic pattern of the terminal and beacon interval information” because it was notoriously well known to utilize method and or a system of saving power in a wireless network comprising an access point, one or more stations, utilizing beacon frame, and an algorithm for calculating a transmission time T of downlink data for the stations by calculating the transmission time of data to be downlinked to the stations using the algorithm, determining a priority queue ordering of the transmissions based on the time calculated for each station, scheduling an awakening time in the frame for each PS station based on the transmission order.

Further, the instant claims obviously encompass the claimed invention of 11/630,159 application and differ only in terminology. To the extent that the instant claims are broaden and therefore generic to the claimed invention of 11/630,159 application, in re Goodman, 29 USPQ 2d 2010 CAFC 1993, states that a generic claim cannot be issued without a terminal disclaimer, if a species claim has been previously been claimed in a co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu (U.S. Pub. No.: 2004/0190467 A1).

With respect to claim 1, 10, 14, 18, Liu teaches A system (See Liu e.g. WLAN network of Fig. 1, Page 1, ¶ [0008]) or An apparatus (See Liu e.g. STA, mobile or portable, Page 1, Lines 1-5 of ¶ [0005]) and or A method comprising: a receiver / receiving beacon frames at beacon intervals (See Liu e.g. transceiver 20 of Fig. 2, The AP 120 may further comprise a transceiver having a receiver section and a transmitter section, receive / transmit packet data, Page 3, ¶ [0042]) exchange message (beacon at fixed interval), station listens for beacon message, or station receives beacon frame (or message), Page 1, ¶ [0013]); and extractor to extract / extracting beacon interval information from a beacon frame (See Liu e.g. data received, extracted, beacon, 140b, TIM, schedule information, Page 3, Lines 1-9 of ¶ [0043]); a traffic monitor configured to / monitoring data traffic of a terminal (See Liu e.g. awaking at periodic time to monitor an SIV and AID, Page 3, Lines 4-6 of ¶ [0030], beacon includes the TIM comprising the AID and SIV frame protocol. In response 420, STA1 finds its AID is indicated in the TIM to receive data from the AP, so STA1 remains awake, Page 6, ¶ [0087]); defining at least one parameter describing a data traffic pattern of the terminal (See Liu e.g. frame body having various parameter, Page 5 ¶ [0070], Figs. 6A-6C); and a controller configured to manage power (See Lie e.g. controller 28 of Fig. 2) for dynamically controlling (See Liu e.g. dynamically adjusted to schedule wake-up time, Page 4, ¶ [0045]) a power state of the terminal so that the terminal is maintained in one of at least two power states (See Liu e.g. station can remain asleep, wake up (or awoken or active), Page 4, Lines 3-7 of ¶ [0046]), on the basis of the at least one parameter (See e.g. based on one or a combination of network (packet size or data length), network traffic, traffic buffering time, data priorities, and data rate, etc., Page 4, Lines 6-8 of ¶ [0045]) describing the data traffic patter of the terminal and beacon interval information (See Lie e.g. Schedule Information Vector (SIV) power saving traffic, schedules information or time, etc. Page 4, Lines 2-7 of ¶ [0046]), wherein the at least two power states comprise an active state and a power save state (See Liu e.g. employing power saving technique, Page 2, ¶ [0019], power saving, sleep and awaking (or active sate or mode), Page 3, ¶ [0030]).

Regarding claims 2, 11, 17, Liu teaches the monitoring (See Liu e.g. awaking at periodic time to monitor an SIV and AID, Page 3, Lines 4-6 of ¶ [0030]) comprise monitoring packet sizes and packet

intervals of the data traffic (See e.g. based on one or a combination of network (packet size or data length), network traffic, traffic buffering time, data priorities, and data rate, etc., Page 4, Lines 6-8 of ¶ [0045], interval or scheduling information, Page 4, Lines 2-7 of ¶ [0046]).

Regarding claim 3, Liu teaches at least one parameter describes packet sizes and packet intervals (See data length, traffic, etc., Page 4, Lines 6-8 of ¶ [0045]).

Regarding claim 4, Liu teaches the controlling determining a sleep interval defining the time periods when the power save state is possible (See Liu e.g. sleep mode until, determine schedule time, Page 7, ¶ [0099]).

Regarding claim 5, Liu teaches the determining comprises determining parameters indicating a timing, a length and a frequency of the sleep interval (See Liu e.g. station enters sleep mode, at the later specified time, Page 6, Lines 1-2 of ¶ [0085], to monitor the channel, Page 5, ¶ [0065]).

Regarding claim 6, Liu teaches the step of supplying additional (inherently) input data including at least one requirement parameter describing requirements set by an application, active in the terminal, for the controlling (See Liu e.g. QoS requirements, Multimedia, Page 1, ¶ [0004], requirements, application, Page ¶ [0065]) the power stat of the terminal (See Liu e.g. sleep mode until, determine schedule time, Page 7, ¶ [0099]).

Regarding claim 7, Liu teaches at least one requirement parameter indicates the maximum period that the terminal may continuously be in the power save state (See Liu e.g. station enters sleep mode, at the later specified time, Page 6, Lines 1-2 of ¶ [0085]).

Regarding claim 8 Liu teaches at least one requirement parameter indicates the quality of service (QoS) level required by the application (See Liu e.g. QoS requirements, Multimedia, Page 1, ¶ [0004], requirements, application, QoS, Page ¶ [0065]).

Regarding claim 9, Liu teaches the step of mapping the quality of service level to input parameters for the controlling step (See Liu e.g. TIM of the beacon, Page 7, ¶ [0098], beacon frame schedule, schedule power saving, subject to QoS requirements, Page 6, Lines 1-2 of ¶ [0083]).

Regarding claim 12, Liu teaches the controller (inherently) comprise an interface configured to control applications residing in the terminal (See Liu e.g. PS method 905 - 940 of Fig. 7), and to receive

additional input data from an application (See Liu e.g. QoS requirements , Multimedia, Page 1, ¶ [0004], requirements, application, Page ¶ [0065]), and wherein the additional input data comprising at least one requirement parameter describing requirements set by the controller (See Liu e.g. PS method 905 - 940 of Fig. 7).

Regarding claims 13, 15, Liu teaches the terminal is a wireless area network terminal or at least system entity is a wireless terminal (See Liu e.g. WLAN, STA, mobile or portable, Page 1, Lines 1-5 of ¶ [0005]).

Regarding claim 16, wherein said at least system entity is an access point connected to a wired network (See Liu e.g. access point, WLAN, STA, mobile or portable, Page 1, Lines 1-5 of ¶ [0005], wired or wireless network, Page 1, ¶ [0008]).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Kiadar (U.S. Pub. No.: 2004/02644413 A1), disclose i.e. transmit / receiving a beacon or other informational frame, extracts the information from the beacon and collected packets may be analyzed to extract information

b) Trainin (U.S. Pub. No.: 2004/0120292 A1), disclose i.e. Based on beacon information that the MAC device extracts (606) from the PLCP header.

c) Liu (U.S. Patent 7, 457, 973 B2). Decode or extract, power save, etc.,.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Eng, George** can be reached @ (571) 272-7495. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamran Afshar/

Primary Examiner, Art Unit 2617